

## Sailing Out of the Doldrums

IT IS HARD to sail in the doldrums. The weather is scorching. Winds are baffling. Fitful squalls become paralyzing calms. It is best to sail determinedly out of the doldrums or to avoid sailing into them. For our purposes, then, it is unwise to dwell on the many doldrums swamping our profession: exhaustion, disappointments, paperwork, accusations, loss of collegiality, diminished stature. Not long ago, some medical sailors resolved to focus on the good news, if only for a few moments. They noted that while it is fashionable to complain, fashion can be constricting. They set out to review and relish some of the elements of our profession that hearten them, even now. They mentioned:

- The march of biomedical science: Never have physicians been able to do so much for so many.
- The privileges and pleasures of the doctor/patient relationship: Physicians are part of the parade of life, never bystanders.
- The challenges of difficult diagnoses and treatments, even AIDS.
- The opportunities to learn from patients and about patients; the opportunities to learn about life, about courage, about applying science.
- The pleasures of preventing disease and disability and, of course, of returning patients to health.
- The satisfactions of being a patient's advocate, of being a trusted ally, of being recognized as well informed.
- The thrill of perfecting a new technique or making a difficult diagnosis.

• The remarkable variety and number of choices:  
*Career tracks:* Patient care, research, teaching, administration, health policy, combinations thereof.

*Time management:* Full-time, part-time; shared practices; sabbaticals.

*Locales:* Fields and streams, inner cities.

*The ever-broadening scope of medicine:* Geriatrics, adolescent medicine, space medicine, medical informatics, imaging, lasers, transplantation, infertility, nutrition.

One physician said, "Consider the alternatives. There is not much else available if you want to do something worthwhile for people." Another noted, "Where there is chaos, there is opportunity." One smiled and said, "I like it when they call me 'Doc.'"

Doldrums recede in the refreshing breezes of renewal.

LHC

## Ignorance—Inevitable but Invigorating

IN THIS ISSUE Marlys and Charles Witte and Dennis Way have written a fascinating article.<sup>1</sup> At times the prose takes on an almost Joycean, free-association quality, and we are obliged to stay alert to track through the syntactic labyrinth. The essence of the article is epitomized by this statement: "Thus, some of our best students, by dint of hard work, probing intellect, and resourcefulness, are leaving the University of Arizona College of Medicine more ignorant than they entered!" I loved it!

To dramatize their "pursuit of ignorance," the authors selected several patients with lymphatic obstructive disorders to highlight the remarkable lack of knowledge that pervades any pathophysiologic discussion of this still enigmatic major drainage system of the body. Certainly ignorance abounds here. But they could have selected almost

any other system. For example, the psychoneuroimmunological messages that fly thick as arrows between mind and body remain a great mystery. But no generation in medicine has been more humbled by exploding knowledge than ours.

In selecting the lymphatic system (they include lymphocytes, lymph nodes, lymph channels, and lymph fluid) as their exemplar, the authors picked a most appropriately baffling subject. The linkage between blocked lymphatics and lymphangiogenesis and angiogenesis fascinates the authors, and with good reason. The ability of the body to generate vessels for new tissue, albeit fat, muscle, or regenerating scar, on demand and with astonishing rapidity is a continuing mystery. If a person gorges and gains 10 lb in a week, the new fat is endowed miraculously with afferent and efferent vessels, plus lymphatics, nerves, and so forth. Is there an "angiogenic cytokine"?

This remarkable, thin-walled, fragile vascular system is entrusted with awesome responsibility—to return interstitial fluid to the venous side. The fearsome clinical consequences of its perturbations are the stuff of horror pictures in classic textbooks (for example, filaria-invoked elephantiasis). The authors provide some lurid pictures. So, although we have known about it for a long time, there remains little that can be done to repair a badly disordered lymphatic system.

I suspect it is appropriate to include lymphocytes in the consideration of the "system." When I left the academic cloister, the lymphocyte was still just a strange, round, peripheral blood cell with a large azurophilic nucleus; no one knew much about it. In infectious mononucleosis (pre-Epstein-Barr), we knew the nucleus got dented, and some peculiar inclusions showed up in the cytoplasm. In patients with acute lymphoblastic leukemia, we saw a horrendous outpouring of primitive precursors that crowded out the marrow. And in those with chronic lymphocytic leukemia, an outrageous productivity of mature cells clogged up nodes and even obstructed lymphatics. But we had no hint of all the wonderment that was to follow as MacFarlane Burnett, Bob Goode, and other pioneers began to unravel the mysteries of the immune system. How far we have come!

Each new level of comprehension opens up new vistas of ignorance. As the authors indicate, the whole area of immunology and molecular biology reminds us of a vast, coiled-up tapestry that has just begun to unfurl. But instead of unrolling in an orderly fashion, it has unfolded and proliferated simultaneously, if erratically, in all directions. Discoveries in every section link up with those adjacent or even leap over each other to join remote areas with some rare and remarkable synergies. It is fast becoming a crazy quilt with junctions and cul de sacs and parallel channels. AIDS, the terrible, has been the unlikely catalyst.

One of the patients described by the authors had the acquired immunodeficiency syndrome. Of course, it was unrecognized back in 1968, but the authors were sufficiently intrigued by the unfamiliar clutter of disparate and disturbing signs, symptoms, and laboratory events that they preserved the tissue and ultimately established human immunodeficiency virus positivity. Their cases serve to illustrate the ultimate illumination—if one is aware of ignorance and perseveres in the pursuit of knowledge.

Ignorance is not bliss. It is the source of many terrible afflictions: prejudice, fear, cruelty, and wars. The fundamental problem with the true ignoramuses is that they do not know that they are ignorant; it is a classic "catch 22."